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| 09/899,398      | 07/05/2001  | Abrar Tirmizi        | 257/210             | 3510             |

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EXAMINER

BLACKNER, HENRY A

ART UNIT PAPER NUMBER

3641

DATE MAILED: 07/19/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/899,398

Applicant(s)

TIRMIZI, ABRAR

Examiner

Henry A. Blackner

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 05 July 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9, 11-15, and 17 is/are rejected.
- 7) ☒ Claim(s) 2, 4-8, 10, 12-13, 16, 18, and 19 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 5 July 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☒ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

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## DETAILED ACTION

### *Oath/Declaration*

The oath or declaration is defective. A new oath or declaration in compliance with 37 CFR 1.67(a) identifying this application by application number and filing date is required. See MPEP §§ 602.01 and 602.02.

The oath or declaration is defective because:

The full name of each inventor (family name and at least one given name together with any initial) has not been set forth.

### *Drawings*

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, claim 10 “*wherein the overall axial length of said initiator assembly is less than 22 millimeters*” must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, claim 18 “*wherein the overall axial length of said initiator and mating connector assembly is less than 22 millimeters when said initiator body is fully received within said enlarged initiator opening*” must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

### ***Specification***

The disclosure is objected to because of the following informality: The description of figure 8, page 2 line 24, states that figure 8 is a "*front view*" of the invention as per figure 7, but is in effect a "*top view taken through lines 8-8 of figure 7*". Appropriate correction is required.

### ***Claim Objections***

Claims 2, 4-8, 10, 12-13, 16, and 18 are objected to because of the following informalities:

1. In regards to claim 2, 10, and 12-13, the term "*initiator assembly*", was previously identified as "*pyrotechnic initiator assembly*".
2. In regards to claim 4-8, the term "*ignition element*", was previously identified as "*pyrotechnic ignition element*".
3. In regards to claim 16, the term "*initiator assembly*", lines 2 and 4, was previously identified as "*pyrotechnic initiator assembly*".
4. In regards to claim 16, the term "*electrical interfaces*", was previously identified as "*initiator electrical interface and bus wire electrical interface*".
5. In regards to claim 18, the term "*initiator*", was previously identified as "*on-board circuitry pyrotechnic initiator*".

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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- (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-4, 7, and 9 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by U.S. Patent No. 6,079,332 to Marshall. Marshall clearly illustrates claim 1 line 2, a pyrotechnic ignition element (46) and two electrode pins (57), claim 1 line 3, control circuitry (54), claim 1 line 4, initiator body (14C), and claim 1 line 6, initiator electrical interface (58), in figure 4 and column 6 lines 63-67 and column 7 lines 1-5, lines 7-12, lines 17-19, and lines 40-52.

Marshall clearly illustrates claims 2 and 9 in column 3 lines 35-37. Marshall clearly illustrates claim 3 in figure 4 and column 7 lines 4-5 and lines 7-19. Marshall clearly illustrates claims 4 and 7, output can (46B) in figure 4 and column 7 lines 17-19.

Claims 11-15 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by U.S. Patent No. 5,200,574 to Cunningham. Cunningham clearly illustrates claim 11 line 4, a mating connector body (160), claim 11 line 5, an enlarged initiator opening (178), and claim 11 line 8, a bus wire (110) and (112) and a bus wire electrical interface (118) and (120), in figures 9 and 19-21 and column 7 lines 44-52 and lines 53-58 and column 11 lines 1-7.

Cunningham clearly illustrates claims 12-15 in figure 21 and column 11 lines 1-7.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 5, 6, and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Marshall in view of Hsu. Marshall discloses the claimed invention in figure 4 and column 3

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lines 35-37 and column 7 lines 9-12 and lines 17-19. That the pyrotechnic ignition element (46) is comprised of a semiconductor bridge element, which is connected to two electrode pins (57), and is enclosed within an output can (46B) having a flared bottom, which contains an initiation charge, and is enclosed within the molded initiator body. Marshall does not illustrate an insulator cup that has a flared bottom, which is enclosed within the molded initiator body (14C).

Hsu teaches in figure 2 and column 2 lines 54-56, that the insulator cup (40) has an outward bottom flange, which is enclosed within the molded initiator body (12). It would have been obvious to one of ordinary skill in the art at the time the invention was made to employ Hsu's method of attaching an insulator cup in order to design a pyrotechnic initiator assembly with greater degree of stability.

Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Marshall in view of Cunningham. Marshall discloses a pyrotechnic initiator assembly, as described above. Marshall does not illustrate a mating connector, as claimed by the applicant. Cunningham discloses a mating connector, as described above. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Marshall's pyrotechnic initiator assembly with Cunningham's mating connector in order to achieve the desired effect of designing a pyrotechnic initiator that would be protected against radiant energy interference.

***Allowable Subject Matter***

Claims 10, 16, 18, and 19 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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*Conclusion*

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following documents show the state of the art in the field of Pyrotechnic Initiators.

U.S. Patent No. 6,341,562 B1 to Brisighella

U.S. Patent No. 6,227,115 B1 to Gruber et al.


U.S. Patent No. 5,955,699 to Perotto et al.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Henry A. Blackner whose telephone number is 703-305-4799. The examiner can normally be reached on 08:15 - 17:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael J. Carone can be reached on 703-306-4198. The fax phone numbers for the organization where this application or proceeding is assigned are 703-306-4196 for regular communications and 703-305-3597 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-306-5771.

hab  
July 12, 2002

  
**CHARLES T. JORDAN**  
**SUPERVISORY PATENT EXAMINER**  
**TECHNOLOGY CENTER 3600**